

REMARKS

In the above-mentioned Office Action, all of the pending claims, claims 1-18, were rejected. Claims 13 and 15 were rejected under §103(a) over the combination of Li (IEEE) and Li ('429). Claim 1 was rejected under §103(a) over the combination of Edfors and Li ('429). Claims 2-12 were rejected under §103(a) over the combination of Edfors, Li ('429), and Li (IEEE). Claims 14, 16, and 18 were rejected under §103(a) over the combination of Li (IEEE), Li ('429), and Edfors. Additionally, claim 17 was rejected under §112, second paragraph for being indefinite, and objection was made to informalities in claims 7 and 13.

Responsive to the rejections of the claims, an amended claim listing is submitted herein. In the amended claim listing, claims 15 and 16 have been cancelled, and independent claims 1, 7, 13, 15, and 17 have been amended in manners believed better to distinguish the invention of the present application over the cited combinations of references used there against.

Claim 17, rejected under §112, second paragraph, has been amended also in manners believed to overcome the §112 rejection thereof.

While the substantive rejections of independent claims 1, 7, and 13 are based on separate combinations of the references, the claims as now amended, are believed to be distinguishable over any of the combinations. Additionally, while claim 17 was not treated on the merits, claim 17 also is believed to be patentably distinguishable over any of the cited combinations.

First, with respect to claims 1 and 7, the recitation of the coefficient interpolator and its analogous step, has been amended, now to recite that an interpolation coefficient matrix is calculated in which the matrix is calculated independent of knowledge of a channel multipath power profile. And, the recitation of the channel estimator, and its analogous method step, has been amended, now to recite that the channel is estimated based upon the interpolation coefficient matrix estimated by the coefficient interpolator and the least square channel estimate made by the LS estimator.

To the extent that the Examiner asserts that Li ('429) discloses such an element or method step, the assertion is respectfully traversed. While reliance is placed on, e.g., column 4, lines 26-29, the descriptions starting on line 30 of the reference and continuing to page 5, line 22,

describe structure and method dissimilar to that recited in claims 1 and 7, as now amended. The description refers to the channel estimator 140. While block 142 of the disclosed channel estimator 140 makes reference to the formation of a noisy channel estimate, there is no disclosure of an interpolation coefficient matrix, as now recited in claims 1 and 7. The delay and 2-D formatter 148, 2-DIFFT 150, diamond filter 152, and 2-DFFT 154, all fail to calculate an interpolation coefficient matrix, calculated independent of knowledge of a channel multipath power profile, as now recited.

Accordingly, claims 1 and 7, as now amended, are believed to be distinguishable over the combination of Edfors and Li ('429) and the combination of Edfors, Li ('429), and Li (IEEE), respectively.

As claims 2-6 and 8-12 include all of the limitations of their respective parent claims, these claims are believed to be patentably distinguishable over the cited combinations for the same reasons.

Analogously, independent claim 13 is also believed to be distinguishable over the cited combination of Li ('429) and Li (IEEE). While not rejected on the merits, as now amended, claims 17 also is believed to be distinguishable over this combination. Support for the amendments to claims 13 and 17 are found, for instance, on page 16, lines 4-23.

Review of the references indicated there not to be disclosure, e.g., of a means for calculating, or corresponding method step of calculating, the interpolator coefficient, as now recited, responsive to the frequency-domain multipath power profile created responsive to calculations of the maximum number of multipaths of the channel.

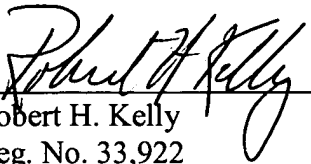
As dependent claims 14 and 18 include all of the limitation of their respective parent claims, these claims are believed to be distinguishable for the same reasons as those given with respect to their parent claims.

In light of the forgoing, independent claims 1, 7, 13, and 17, and the remaining ones of the dependent claims are believed to be patentably distinguishable over the cited combinations of references used thereagainst. Accordingly, reexamination and reconsideration for allowance of these claims is respectfully requested. Such early action is earnestly solicited.

Appl. No. 09/746,376
Amdt. dated 8 November 2004
Reply to Office Action of 6 August 2004

Respectfully submitted,

Dated: 8 Nov 04


Robert H. Kelly
Reg. No. 33,922

SCHEEF & STONE, L.L.P.
5956 Sherry Lane, Suite 1400
Dallas, Texas 75225
Telephone: (214) 706-4201
Fax: (214) 706-4242
robert.kelly@scheefandstone.com